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ABOU JOSEPH.

Abou Joseph flourished in the reign of Haroun al Raschid, by whom he was appointed to an office in Bagdat, similar to that of our Lord Chancellor. He was not only a man of Learning, but of much quickness in repartee, as appears from the following anecdote.

Some persons had consulted him on some point, on which he candidly acknowledged his ignorance. They reproached him with receiving large sums of money as a salary from the royal treasury; notwithstanding which he did not discharge his duty, as was proved by his ignorance in this particular. "My friend," replied he, "I receive a salary proportioned to what I know, but if I were to receive in proportion to what I do not know, all the treasures of the Khalifat would be insufficient to pay me."

ORIENTAL POETS.

The poets of Arabia stand high in the estimation of the Eastern Literati. One of the most conspicuous of them is Abou Tamam, who was born about

the year 190 of the Hegira, and died about the year 231. His life was rather short, as had been predicted of him by one of his friends, who, with a striking accuracy of comparison, said that the activity of his mind, would consume his body, as the blade of an Indian sword wears out its sheath. The testimony given of his works by a brother poet, is one of the most unequivocal kind. When a writer not only praises the works of a contemporary author, but even exalts them above his own, we have the strongest evidence in their favour. This is the case with respect to Abou Tamam's works: for Bakhteri, who is highly esteemed as a poet among the Arabians, being asked his opinion of them, and whether himself or Abou Tamam were the better poet? ingeniously declared, "what is good in Abou Tamam's writings, far surpasses the best of mine; while the bad in mine is much more tolerable than the exceptionable parts of his."

USEFUL INVENTIONS.

On employing Coal Gas for lighting small manufactories, and for other purposes from a paper by Mr. B. Cook, of Caroline-street, Birmingham.
PHIL. JOUR. V. XXI, P. 10291.

HITHERTO Coal Gas has only been employed permanently for lighting large manufactories. Mr. Cook has applied this Gas on a smaller scale in his manufactory of metallic toys, and has very benevolently published an account of the great advantages he has found from its use to induce others to follow his example.

Mr. Cook's apparatus consists of a small cast iron pot, containing about eight gallons, with a cast iron cover luted to it with sand, which serves as a retort for forcing over the gas from the coal placed in it, by fire applied beneath it; from this pot a pipe passes the gas, through water, to a reservoir, which holds about 400 gallons, whence it is conveyed all round the work-shops, through tubes formed of old gun barrels, which may be procur-

ed from the gun manufacturers at a cheap rate. Mr. Cook finds the flame of the gas much superior to that from a lamp urged by a blow pipe for soldering, which is much used in his trade; this flame is quicker and sharper, is constantly ready for use, and performs the work more neatly and more expeditiously than the lamp which requires to burn some time before its flame is sufficiently powerful for use, so that both the workman's time is lost by it, and much oil is wasted to no purpose.

This very useful application of the gas, of which Mr. Cook is the first inventor, makes it necessary to keep the apparatus in constant action, day and night, while his men are at work, and twenty-five pounds of coal put into the pot, are found to be sufficient to afford all the gas wanted every twenty-four hours, with a considerable surplus, which is burned to waste when not wanted; the whole quantity of gas produced by this quantity

of coal is computed to be 600 gallons, twenty-five pounds more coal will be fully adequate for the fire beneath the pot, during the same period; the coke produced in the process may be used for the same purpose.

This quantity of coals cost Mr. Cook only four pence, and for this small charge he has light supplied equal to that of eighteen or twenty candles, of six to the pound, besides the saving of the oil and cotton for his soldering lamps, which used to cost him full 30*l.* a year: from this saving only five shillings a week are to be deducted for the charge of a man to attend the gas apparatus, part of his time.

Mr. Cook only values the coke produced at 2*l.* 10*s.* a year, which from his own account, in another part of his paper, is evidently too little; for he states there, that coke in stoves or furnaces lasts so much longer than coals (on account of the flame of the bitumen in the latter, causing the whole to consume with great rapidity) that "two fires of coke will last longer than three of coal." He also makes no allowance for the value of the tar, setting that off for casual losses; but it is to be hoped that this tar will be more valued and have a better sale, when its good properties for paying ships are better known, of which a notable instance has been mentioned, in the account of the ship *Economy*, constructed on Mr. J. W. Boswell's patent plan, which vessel was paid with it on her last voyage, but even if not sold, it would be of some value in burning in the retort to produce gas.

Mr Cook's statement of the account of the annual cost of the gas, contrasted with that of candles, &c. for the same purpose, is as follows:

Yearly expense in coals and	Dr.
man,	£18 10 0
Interest of forty-two pounds	
(cost of apparatus)	2 0 0
Profits per year,	30 0 0
	<hr/>
	£50 10 0
Twenty weeks candles, at eight-	Cr.
teen shillings per week,	£18 0 0
Oil and cotton for lamps,	30 0 0
Coke worth, estimated,	2 10 0
	<hr/>
	£50 10 0

An apparatus which saves 30*l.* per annum, costs from Mr Cook's statement, only 42*l.* He thinks the plan might be used to great advantage on a still smaller scale, for those who use but six candles and one soldering lamp, and for this purpose a first expense of ten or twelve pounds would be sufficient, which would be saved in the first year. Mr. Cook acknowledges the profit to be under-rated, as the gas would not be wanted for light in summer; the coke seems rated so much beneath its value, that probably the error of the credit on this account would add much to that mentioned, and both together cause the profit to be much higher than what is stated. Mr. Cook states that considerable national benefit would arise from the general use of gas lights, by reducing the importation of tallow, and of spirits of turpentine; as the spirit which might be drawn from the tar (of which spirit a good deal is also produced in procuring the gas) would answer all purposes probably as well as that imported from Russia, which now costs twenty shillings a gallon, though formerly the same quantity was sold for three and sixpence.

Mr. Cook has promised to communicate to the public, plans and drawings of a small gas apparatus sufficient to enable any man to put one up for himself; which will be of the more value as we have as yet no exact description in print of the whole process of managing the gas from actual practice in this country; many minute parts of the apparatus, which a person familiar with them would not think of consequence enough to mention, would require many trials from any one else, before they could be made to the best advantage.

A method of constructing a gas apparatus, called a *Thermopæle* was published in *Sonini's Journal*; and afterwards a translation of the account was inserted in the *Repository of Arts*, No. 49, with a plate. It does not appear, however, from this that any stoves were actually made on this plan, or that its utility was much proved by experiment. It contains the only description we are acquainted with, of a method of passing the gas through water.

Mr. Cook has remarked, that if the use of coal gas became universal, so much coke would be made in producing it, that it would probably put a stop to the manufacture of coke at the coal works. This would also be a national advantage, as the prodigious quantity of heat and light, at present, wasted in the coal works, would then be all converted to profitable use. He has also observed, that another consequence of this measure would be, the reduction of the price of candles, oil, tallow, and of course, of soap.

Cheap and easy method of Charring Bog-turf into Coke, from the Transactions of the Dublin Society.

Observing that charred turf is not yet become a manufacture, or brought to market for the use of smiths or various manufacturers, it is proposed to render this easy and profitable to every poor cottier.

Let a pit be dug in the floor of the cabin, near the hearth, two feet deep, and as long and as broad, as a flag can be conveniently got; if of the length of the hearth, and three feet wide, the better.

Let a hole be cut, either round or square, in the middle of the flag, large enough for the arm to go in, and to reach to each extremity of the pit, and let a flag-cover be made to fit the hole; there may be an iron ring in the cover to lift it off and on.

Whenever the poor cottier boils his potatoes, there are usually left in the grate, or on the hearth, a number of pieces of turf, thoroughly burnt, fit for coke or char, which are suffered to waste and burn out into ashes.

Let these thorough burnt lumps of turf, in their glowing state, be taken off with the tongs, and conveyed into the pit, covering the hole of the flag immediately, to exclude the air; these lumps of turf will be charred or coked, fit for use. When the pit is full, let it be emptied out into a dry corner of the cabin, till there is a quantity for market, it will be readily bought up by the smiths, for the forge, or changed for horse shoes or iron work, wanted for cars. The country smiths seldom burn the turf properly for coke, or cover it sufficiently from the air, when burnt, to make good char or coke.

A quantity made by this direction was sent to the manufacturers of Japan, at Newry, and they certified that it was nearly equal to charcoal, but burnt something quicker. The greasy or soapy black turf is the best for coke.

If the landlords would make a few of these pits here and there, on the mountainous or boggy parts of their estates, it would soon become common.

Description of a temporary Life-boat, recommended to be used on the coast of Ireland.

Reading the account of the shipwreck at Ballycastle, I could not but lament the want of that useful machine, a life-boat, which has proved so serviceable in similar cases, when all prospect of assistance without it, seemed utterly impossible. As it is however improbable that a sufficient number of boats on the most approved plan could be stationed in sufficient numbers along our widely extended coasts, to be ready in every case of emergency; I offer the following plan for converting any boat into a good substitute. It is well known that air is a thousand times lighter than water, and that a cubic foot of fresh water weighs sixty-five pounds; could therefore a sufficient number of air-tight compartments be made in any boat, it is clear she must float when even filled with water and heavy articles. The Esquimaux and Greenlanders construct boats, which, from being covered over with a skin, which laces tight about the body of the person who navigates them, thereby excluding water from the cavity, pass without danger through the most turbulent seas; and Dr. Franklin, among many other valuable hints for enlarging the comforts of mankind, suggests this idea of having air-tight compartments in vessels to augment their *floatability*, and also, that by bunging up the water casks as they were emptied, a collection of air might be formed, capable of floating several tons*. All that is necessary to convert any common boat into a life-boat is to dispose a number of small casks, closely bunged, under the thwarts, and in other parts of the boat, and securing them from mov-

* See Franklin's Works, vol. ii. 170.

ing, for upon their being firmly fixed, depends the safety of the crew. A ten gallon keg, holding eighty pounds of water may serve as a standard to reckon from, and as a small boat, or Norway yawl, can hold ten such small casks, without inconvenience, and as the boat will float, when without heavy articles, even when full of water, we may safely calculate on a *floatability* of eight-hundred pounds, and so in proportion on all other occasions. Some ballast may be necessary in order to give steadiness, but this need be in small quantity, if disposed in the very bottom, or it might even be pieces of timber, which would not diminish the buoyance, yet preserve the boat upright among the waves, especially as we do not suppose the boat to carry sail. In a boat thus prepared, little danger is to be apprehended, and when confidence enables men to think with composure, they will be able to make good a landing at the most favourable moment, and skilful seamen will know that even during tremendous gales, by attention to the waves, a safe landing may be effected in many places, where certain destruction would most inevitably follow a precipitate attempt.

People accustomed to triumph over difficulties acquire, by habit, a contempt for danger, but certainly it would be worth consideration to have all fishing boats, pleasure boats, and one boat at least belonging to every ship, adapted at all times for standing heavy seas without being liable either to sink or upset, a matter easily accomplished if the ballast was a bar of iron placed on the keel and airtight compartments might be made without much expense or inconvenience, underneath the seats, and at the stem and stern, of sufficient capacity, both to float the ballast with any common quantity of loading, and to ensure safety to the crew.

Since writing the above, I am happy to find the latter part of this plan has been carried into effect by Mr. Christopher Towill, and after the most satisfactory trials, a figure, with a complete description, has been given to the public, in Nicholson's Journal, of January 1, 1809. "The following

is a description of the boat as built by Mr. Christopher Towill, of Teignmouth. Her length is thirty feet, her breadth ten, her depth three feet six inches. The space between her timbers is fitted up with Pinewood; this is done with a view to prevent the water lodging there. The pine wood is well caulked and paid. She is buoyed up by eight metal cases, four on each side; these are water-tight, and independent of each other. They will serve to buoy up six tons, but I find that all the buoyant parts of the boat, taken collectively, will buoy up ten tons. The cases are securely decked over and boarded on the sides with pine. There is a scuttle to each case to put goods in; the edges are lined with baize, and over each scuttle in the case, is one of wood, of a larger size, the margin of which is lined in the same manner, to exclude the water. Between the cases are Norwegian balks, bolted to the bottom, and fastened to each other by iron clamps, and decked over. The depth of her keel is about nine inches below the garboard-streak, the dead rising is four inches. Her keel is narrow at the under part, and wide above, for the purpose of giving the timber a good bed, which will support the bolts in case a necessity should arise to encounter sand-banks. In sailing over a bar, or in places where the water is shallow, the rudder will with ease draw up even with the keel, and when in deep water it will let down, instantly, and with equal facility, a foot below it; in consequence of which advantage, the boat is found to steer remarkably well. The fore-castle of the boat forms a cabin 10 feet wide, 6 feet long, and 4 feet deep, into which women, children, and disabled persons may be put. It is furnished besides, with two grapnels, very proper to be thrown on board a wreck, to ride by. The grapnel ropes will assist the sufferers to remove and escape from the wreck to the boat. She is likewise equipped with masts and sails, and is as manageable with them, as any boat of her dimensions can possibly be. In a tempest however, she must be dismasted and rowed by fourteen men, with oars, 16 feet

long, double banked. The men are all fastened to the thwarts by ropes, and cannot be washed from their seats. As a pleasure-boat she answers extremely well. And with respect to safety I can say, that I have sailed in her from Brighton, round the Cor-

nish coast to Conway, in North Wales, without any accident, though we experienced some dreadful weather on our Voyage.".....*Nicholson's Journal of Natural Philosophy, Chemistry, and the Arts*, vol. xxi. p.25, with the plan,

ORIGINAL POETRY.

ANALYSIS OF 1808.

AN ODE, ADDRESSED TO THE PRINTERS OF
THE BELFAST MAGAZINE.

Lectorem delectando pariterque monendo.

GOOD Messieurs Printers, SMYTH and
LYONS,

Nurses and accoucheurs of science,

Plying aloft there, at your Magazine,

From case to case so nimbly roving,

Your ALPHAS and OMEGAS moving,

O'er Koster's* sable imps, supreme you
reign :

Making them skip, like conscripts, to their
places,

Where rank and file, arrang'd in iron
spaces,

They form divisions, now, as grenadiers,
Araia, as Voltigeurs, diffusely cracking,
Now overthrown, the rogues are sent a
packing,

And heap'd in holes together, lie in
tiers.

What will you cause these imps of yours
to say ?

When they *try back*, in order to display

A brief epitome of last year's wonders,

Will they, in terms of truth and candour
state,

A faithful picture of a scene, replete

With statesmen's errors—military blun-
ders?

One royal house dethron'd—another fled ;
Commerce convuls'd—war's horrors wide-
ly spread—

Conventions—edicts—orders, and embar-
goes,

Arms—horses—powder—men, and cash
in cargoes

To Spain transported, there to reinstate

King FERDINANDO, on his father's seat,

Restore the inquisition, and replace

In monkish splendor, all the monkish race.

Should these same imps of Bonapart'
say ought ;

Take the advice of one by prudence taught,

* Laurentius Koster, a citizen of Haarlem in-
ventor of moveable types.

Of BONI always as you go along,

Say " every action of his life was wrong,"

Call him " a monster—tyrant—hell-hound
—thief,

Robber—and murderer—hypocrite; in brief,

Pour torrents of abuse upon his head,

Else—what you say of him, will ne'er be
read.

Should LUSITANIA chance to be the theme,

VIMERIA's battle, or—they must not name

The officer commanding, but assert,

" That every British soldier did exert

His native prowess, and that vict'ry flew,

From rank to rank, commanding to pursue

The routed Gauls, till General SUPERSEDE,

With raven's scream their martial ardour
staid,

Croaking in accent like the voice of fate,

The dismal order—BRITISH TROOPS retreat !

This *facile* General, what he is, or who,

Whether *Sir Arthur—Harry—or Sir How !*

INQUIRY DOETH NOT TELL ! and therefore,
num,

Mynheer Van Koster must, on this be dumb,

Should Spanish patriotism next come on,

God knows, to praise it, all are very prone,

And much, *all like* a fashionable road :

Upon this subject, to remove all doubts,

And more sublimely sympathize our
thoughts,

From OLD ALCÆUS—take the following
ode :

" What constitutes a state ?

Not high-raisd battlement or labour'd
mound,

Thick wall or moated gate,

Not cities proud with spires and turrets
crown'd,

Not bays and broad-arm'd ports,

Where, laughing at the storms, rich navies
ride,

Not starr'd and spangled courts,

Where low-brow'd baseness wafts per-
fumes to pride :

No—MEN, high-minded MEN,

With powers as far above dull brutes en-
dued,